UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,158	12/11/2001	Dale Ray	29250/CEO4833N	6121

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EXAMINER
AHMED, SALMAN

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/015,158	RAY, DALE
	Examiner	Art Unit	
	Salman Ahmed	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *2/9/06(Amendment)*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,2,4-9,11-18,20-26,28-33* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,2,4-6,8,9,11-13,15-18,20-22,24-26,28-30,32 and 33* is/are rejected.

7) ☒ Claim(s) *7,14,23 and 31* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *11 December 2001* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892).

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Applicant has amended claims 1, 9, 17 and 26.

Applicant has cancelled claims 3, 10, 19 and 27.

Claims 1, 2, 4-9, 11-18, 20-26 and 28-33 remain pending.

Claims 1,2,4-6,8,9,11-13,15-18,20-22,24-26,28-30,32 and 33 are rejected

Claims 7,14, 23 and 31 are objected to.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 4, 17, 24, 26 and 32 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Schober et al. (US PAT 6493320), hereinafter referred to as

Schober, in view of Silverman (US PAT 6731649).

In regards to claims 1, 4, 17 and 26 Schober teaches in a communication system

(figure 1 element 100), wherein a controller (figure 1, element 105b or 105a) and a

communication resource or controlled device (figure 1, element 105b or 105a) are in

communication via a communication link (figure 1 element 110a), a method for enabling

a communication resource reset, the method comprising: providing a physical layer

element (figure 2A element 207a) within the communication resource, the physical layer

element being operatively coupled to the communication link; monitoring (column 10

lines 22-23, the link control unit 205b (FIG. 2B) monitors 620 the receiver 365b) a link

parameter (column 2 line 54, the transmission speed of a signal across the link) via the

physical layer element (column 10 lines 22-23, receiver 365b), the link parameter being

associated with the communication link; and restoring the communication resource to

an initial state (column 6 lines 40-46, the sequence 400 begins with an initialization

procedure 405) in response to a trigger event so that the controller is operable to

reestablish communication and (column 7 lines 48-49, communication is then

established 435 between tuning systems 200a and 200b (via link control units 205a and

205b)) with the communication resource, the trigger event (column 6 lines 40-46, An

event that triggers the start of the link initialization) being associated with the link

parameter (column 6 lines 40-46, the sequence 400 begins with an initialization

procedure 405. In the initialization procedure 405, the link control units 205a and 205b

(FIGS. 2A and 2B, respectively) are reset 410 (FIG. 3). An event that triggers the start

of the link initialization and tuning sequence 400 may only be seen by one end of a link.

Such an event may, for example, be a router hardware reset or a link error occurrence.

and (column 7 lines 48-49) communication is then established 435 between tuning

systems 200a and 200b (via link control units 205a and 205b)).

In regards to claims 1, 17 and 26 Schober does not explicitly teach the link

parameter is associated with an Ethernet link.

It is also well known in the art to have Ethernet channel carried over a synchronous digital hierarchy ITU-T recommendation G.701 type network between two nodes. Silverman in the same field of endeavor teaches connectivity between the base stations (BTSs), base station controllers (BSCs) being Gigabit Ethernet (column 14 lines 55-64).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Schober's method by incorporating the concept of Ethernet communication link as taught by Silverman. The motivation is that (as taught by Silverman, column 14 lines 13-15 and 55-64) when a wireless, laser or optical alternative becomes available then the CLEC can easily take advantage of the fact that IP works with any link layer protocol, including Ethernet and SONET. With the introduction of QoS in Gigabit Ethernet networks and the availability of TDMoIP, IP is very seriously considered as the preferred solution.

In regards to claims 17 and 26 Schober teaches a processor (figure 2A element 220a). In regards to claims 17 and 26 Schober teaches a first logic or physical layer element that directs the logic circuit to communicate with a physical layer element within the communication resource, the physical layer element being operatively coupled to the communication link (figure 2A, elements 210a and 250a). In regards to claims 17 and 26 Schober teaches a second logic or reset element that directs the logic circuit to monitor a link parameter via a physical layer element, the link parameter associated with the communication link (column 10 lines 22-23, the link control unit 205b (FIG. 2B) monitors 620 the receiver 365b)). In regards to claims 17 and 26 Schober teaches a

third logic or reset element that directs the logic circuit to restore the communication resource to an initial state in response to a trigger event so that the controller is operable to reestablish communication with the communication resource, wherein the trigger event is associated with the link parameter (column 6 lines 45-55, CLK1 (which is the receive clock for the tuning system 200b at the opposite end of the link 110a). The loss of the receive clock forces the link control unit 205b (of tuning system 200b) to also re-start the initialization and tuning sequence 400. As a result, both link control units 205a and 205b (FIGS. 2A and 2B, respectively) become synchronized in starting initialization and tuning procedure 400).

In regards to claims 24 and 32, Schober teaches the logic circuit comprising an application specific integrated circuit (column 1 lines 29-34, components that are used for forming links include, for example, integrated circuits, packaging for integrated circuits, printed circuit boards, connectors, cables, drivers, receivers, and other components).

3.   Claims 2, 8, 9, 16, 18, 25 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schober in view of Silverman, in view of Grilli et al. (US PAT PUB 2004/0032836), hereinafter referred to as Grilli.

In regards to claims 2, 8, 9, 16, 18, 25 and 33 Schober in view of Silverman teach, apparatus and method for automatically initializing link which is associated with Ethernet to achieve improved link performance as described in the rejections of claims 1, 7 and 26 above.

In regards to claims 2, 9 and 18 Schober in view of Silverman do not explicitly teach the reset occurring system being a wireless system with base station controllers, base stations serving mobile stations. In regards to claims 8, 16, 25 and 33 Schober do not explicitly teach of the system being CDMA, TDMA compliant.

In regards to claims 2, 9 and 18 Grilli teaches (page 12 section 0119) virtual synchronization may be maintained for all or a subset of the base stations 104 under the control of the RNC 110. If and when a particular base station 104 undergoes a reset (e.g., due to software or hardware failure), the RNC 110 may initiate the NBAP procedure with this base station 104 and obtain a partial-range relative time measurement for the base station 104, to virtually synchronize it with the other base stations 104. The reset of this base station 104 does not affect the operation of other base stations 104, which may continue to provide the benefits of virtual synchronization. In regards to claims 8, 16, 25 and 33 Grilli teaches (page 1 section 0005) the systems may be based on code division multiple access (CDMA), time division multiple access (TDMA), or some other multiple access techniques

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Schober in view of Silverman's teaching by incorporating Grilli 's teaching of a link in a wireless system. The motivation is that (as suggested by Grilli, page 1 section 0005) wireless communication systems are widely deployed to provide various types of communication including voice and packet data services.

4.   Claims 11, 12, 13, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Schober in view of Silverman in view of Grilli, in view of Kondylis et al. (US PAT

6665311), hereinafter referred to as Kondylis.

In regards to claims 11, 12, 13, 15 Schober in view of Silverman in view of Grilli

teach, apparatus and method for automatically initializing link to achieve improved link

performance as described in the rejections of claim 9 above.

In regards to claims 11, 12, 13, Schober in view of Silverman in view of Grilli do

not explicitly teach a trigger event is a decrease in link speed associated with the

communication link for a time period.

In regards to claims 11, 12, 13, Kondylis teaches (column 6 lines 39-42) the

technique of continuously monitoring the input traffic rate so that it can increase or

decrease the reserved bandwidth based on traffic fluctuations.

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify Schober in view of Silverman in view of Grilli's teaching

by incorporating the concept of monitoring rate to trigger an event as taught by

Kondylis. The motivation is that (as suggested by Kondylis, column 6 lines 39-47) such

technique of continuously monitoring the input traffic rate provides the ability to increase

or decrease the reserved bandwidth based on traffic fluctuations thus providing strict

quality of service (QoS) guarantees

In regards to claim 15, Schober in view of Silverman teaches the logic circuit comprises an application specific integrated circuit (column 1 lines 29-34, components that are used for forming links include, for example, integrated circuits, packaging for integrated circuits, printed circuit boards, connectors, cables, drivers, receivers, and other components).

5.   Claims 5, 6, 20, 21, 22, 28, 29, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schober in view of Silverman in view of Kondylis et al. (US PAT 6665311), hereinafter referred to as Kondylis.

In regards to claims 5, 6, 20, 21, 22, 28, 29, 30 Schober in view of Silverman teach, apparatus and method for automatically initializing link to achieve improved link performance as described in the rejections of claims 1, 7 and 26 above.

In regards to claims 5, 6, 20, 21, 22, 28, 29, 30 Schober in view of Silverman do not explicitly teach a trigger event is a decrease in link speed associated with the communication link for a time period.

In regards to claims 5, 6, 20, 21, 22, 28, 29, 30 Kondylis teaches (column 6 lines 39-42) the technique of continuously monitoring the input traffic rate so that it can increase or decrease the reserved bandwidth based on traffic fluctuations.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Schober in view of Silverman's teaching by incorporating

the concept of monitoring rate to trigger an event as taught by Kondylis. The motivation is that (as suggested by Kondylis, (column 6 lines 39-47) such technique of continuously monitoring the input traffic rate provides the ability to increase or decrease the reserved bandwidth based on traffic fluctuations thus providing strict quality of service (QoS) guarantees

Allowable Subject Matter

6.   Claims 7, 14, 23 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

1.   Applicant's arguments, see page 10 of the Remarks section, filed 2/9/2006, with respect to the USC 112 rejection to claim 9 has been fully considered and are persuasive. The USC 112 rejection to claim 9 has been withdrawn.

2.   Applicant's arguments see pages 10-13 of the Remarks section, filed 2/9/2006, with respect to the rejections to claims 1, 4, 17, 24 and 32 have been fully considered. Applicant's amendment to claims 1, 17 and 26 necessitated the new ground(s) of rejection for claims 1, 4, 17, 24 and 32 presented in this Office action.

3.   Applicant's arguments see pages 10-13 of the Remarks section, filed 2/9/2006, with respect to the rejections to claims 2, 8, 9, 16, 18, 25 and 33 have been fully considered but they are not persuasive. Applicant argues that Grilli does not teach or suggest a communication link between a base station and base station controller where

the base station includes a reset element being operable to monitor a link parameter associated with the communication link via the physical layer element, and wherein the link parameter is associated with Ethernet link and the reset element being operable to restore the base station to initial state in response to a trigger event so that the base station controller operable to reestablish communication with the base station. However, examiner respectfully disagrees with this assertion. The present claim language is broad and in view of the broadest reasonable interpretation of this language, Grille teaches (page 12 section 0119) virtual synchronization may be maintained for all or a subset of the base stations 104 under the control of the RNC 110 (a base station controller). If and when a particular base station 104 undergoes a reset (e.g., due to software or hardware failure), the RNC 110 may initiate the NBAP procedure with this base station 104 and obtain a partial-range relative time measurement for the base station 104, to virtually synchronize it with the other base stations 104. The reset of this base station 104 does not affect the operation of other base stations 104, which may continue to provide the benefits of virtual synchronization. Applicant's amendment to claims necessitated the new ground(s) of rejection (Please see below).

Applicant argues that (page 13, 3rd paragraph) there is no suggestion to combine the references and certainly no teachings in either reference that would suggest a modification of Grille to use the system of Schober. Any assertion that such a motivation to combine exists, is hindsight reconstruction based on Applicant's disclosure. However, examiner respectfully disagrees with this assertion. The test for obviousness is not

whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art at the time the invention was made. See In re Keller 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Conclusion

4.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salman Ahmed whose telephone number is (571)272-8307. The examiner can normally be reached on 8:30 am - 5:00 pm.
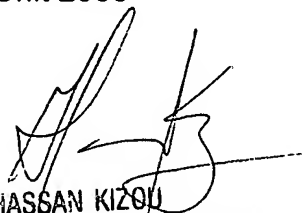
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571)272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit 2666

SA

03/16/2006

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